



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,177	02/02/2001	Michel Droux	201975US3PCT	8607
22850	7590	12/15/2003	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			YAO, SAMCHUAN CUA	
		ART UNIT		PAPER NUMBER
		1733		

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/774,177	DROUX, MICHEL
	Examiner	Art Unit
	Sam Chuan C. Yao	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 October 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 17-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____                                     |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 17-18, 21-22 and 24-25 are indefinite, because it is unclear what is intended by "*strand formed of filaments*". Based on Counsel's argument on page 5 full paragraph 3, the limitation is intended to read on continuous strand and non-continuous strand. If this is the case, the chosen terminology is repugnant to the ordinary and generally accepted meaning of the term "strand formed of filaments, because the term "*filaments*" connotes continuous fibers. For instance, Bolen et al (US 3,936,558) noted that "*Strand of filaments have superior strength because of the continuous nature of the filaments ...*" (col. 1 lines 26-35). As for a passage cited by Counsel in Bolen et al "... *the mats are bonded webs of chopped fibrous glass strands.*", this passage does not indicate in any way the strand is in a form of filaments. Using the above terminology "*strand formed of filaments*" without express recitation that it is intended to

Art Unit: 1733

encompass chopped and unchopped filaments, renders the recited claims indefinite.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 22-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As far as the Examiner can tell, no express support can be found for the newly added limitation: “*... at least one binder in the form of a liquid is deposited onto said at least one first layer after said at least first layer has been at least partly opened ...*” (bold face added) per claim 22; and, “*at least one binder in powder form is deposited separately from the at least one binder in the form of a liquid, said at least one binder in the form of a powder being poured onto [the] said at least one second layer after [the] said at least first layer and [the] said at least second layer are superposed.*” per claim 23 without any guidelines/guidance from Counsel/Applicant as to where support might be found, this engenders a New Matter situation.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Bolen et al (US 3,936,558).

Note: the limitation “said at least partly opened at least one first layer and said at least one second layer are superposed” does not preclude an intervening layer between the 1<sup>st</sup> layer and the 2<sup>nd</sup> layer. In addition, none of these claims also preclude at least partially opening both the 1<sup>st</sup> and 2<sup>nd</sup> layers.

Bolen et al discloses a glass reinforcing filamentary multi-layer mat, the mat comprises “*at least two layers of strands of continuous filaments*” and organic binder in each layer, one of the layers are “*dispersed to form a mesh size*” which entraps a binder material; while other layers have mesh size which do not necessarily entrap a binder material; the resultant filamentary mat has “variable mesh sizes or characteristics by selectively filamentizing strands or a layer of strands already in place in a mat-like collection of strands.” (i.e. “*one layer having the filaments of that more dispersed than filaments in the other layer*”); and further teaches forming a mat from successive layers of strands of continuous filaments; the strands in **one** of the layers “are opened to separate the filaments

Art Unit: 1733

*of the strands"; wherein the strand of filaments are opened using a liquid strand dispersing phase of a binder impinging against the mat (emphasis added; abstract; col. 3 lines 31-39; col. 6 lines 9-20; claims 1-2). Note: a layer with more disperse filaments is taken to be a first layer, while a layer with less disperse filaments is taken to be a second layer.* Although not explicitly disclosed, the "at least partially dispersed" layer of a mat taught by Bolen et al must inherently have a filamentary dispersion gradient, because the filaments around a proximity to the openings of the "at least partially dispersed" layer are more dispersed than those which are distal from openings. Moreover, since strands in the 2<sup>nd</sup> layer are not completely dispersed, the filaments must least be held together within the strands.

Note: Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products."** In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).

Note: The limitation in claim 23 requiring a binder in powder form and in liquid form is taken to read on binder particles in a liquid dispersion medium taught by Bolen et al.

It is acknowledge that, claims 22 and 25 require depositing a liquid resin onto a 1<sup>st</sup> layer before the 1<sup>st</sup> layer is superposed onto a 2<sup>nd</sup> layer. Once again, this

Art Unit: 1733

limitation does not preclude forming a mat, where a 2<sup>nd</sup> layer of the mat being impregnated with a resin binder and/or at least partially opened before and/or after a 1<sup>st</sup> layer and the 2<sup>nd</sup> layer are superposed.

*"Even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production."* See MPEP 2113.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bolen et al (US 3,936,558) as applied to claim 22 above.

This alternative rejection is made in the event that, a binder in powder form and in liquid form recited in this claim distinguish over binder particles in a liquid dispersion medium taught by Bolen et al.

Since Bolen et al teaches using a binder-medium comprising a suspension of binder particles or resin emulsion **or** liquid resin, and further teaches impinging a mat with a first binder-medium and a second binder-medium; and since a preference on whether to use a combination of a suspension of binder particles and a liquid resin or not is taken to be well within the purview of choice in the art, this claim would have been obvious in the art (col. 6 lines 1-29; figure 1). None,

but only the expected result of impinging and impregnating a mat with a binder would have been achieved.

### ***Response to Arguments***

10. Applicant's arguments filed on 10-24-03 have been fully considered but they are not persuasive.

Counsel argues on page 6 3<sup>rd</sup> full paragraph that all layers of strands are provided onto a conveyor and then the layers are subjected to impingement operations using a dispersing phase of a binder; accordingly it is difficult to control the dispersion of binder through out the mat and to control the degree of opening of any given layer. It is respectfully submitted that, Counsel's argument is not commensurate with the scope of the recited claims. There is nothing in the recited claims, which require controlling a binder dispersion and/or controlling opening degree of any given layers. The recited composite or mat basically requires a 1<sup>st</sup> layer comprising at least partly open strand of filaments, and a second layer comprising strand of filaments superposed onto the 1<sup>st</sup> layer; wherein these two layers are superposed. Since, the recited claims use an open transitional phrase "*comprising*", these claims do not preclude using a second layer comprising strands of filaments which are impregnated with a binder and/or are at least partially opened, before and/or after the 1<sup>st</sup> and 2<sup>nd</sup> layers have been superposed. In fact, claim 23 requires pouring resin powder onto at least one second layer after superposing the at least 1<sup>st</sup> layer and the 2<sup>nd</sup> layer.

Counsel argues on page 7 1<sup>st</sup> full paragraph that "*the Bolen et al. reference does not teach all of the limitations recited in claims 17 and 21*", it is suggested for Counsel to

Art Unit: 1733

particular point out which structural limitation(s) in the recited composite or mat which is/are not disclosed by Bolen et al. As noted earlier, *"Even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production."* See MPEP 2113.

Counsel argues that, claims 18 and 24 require *"at least one second layer of at least one strand formed of filaments which are held together within the strand, but also the at least one first layer has a filament dispersion gradient"*. It is true that, Bolen et al does not explicitly teach these limitations. However, these two limitations are inherent in the mat taught by Bolen et al. As for the 1<sup>st</sup> limitation, as noted above, since filament strands in the 2<sup>nd</sup> layer taught by Bolen et al are not completely dispersed, the filaments must least be held together within the strands. In fact, only **one** of the layers needs to be *"at least partially dispersed to form a mesh size which entraps binder particles ..."* (abstract). As for the second limitation, since the 1<sup>st</sup> layer taught by Bolen et al are *"at least partially dispersed"*, this layer must inherently have a filament dispersion gradient, because the filaments around a proximity to the openings of the *"at least partially dispersed"* layer would be more dispersed than those which are distal from the openings.

Note: Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and**

Art Unit: 1733

**compare prior art products.” In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).**

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (703) 308-4788. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff H Aftergut can be reached on (703) 308-2069. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7115.

Art Unit: 1733

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2058.



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
12-11-03